

Application No. : 10/676,534
Prel. Amdt. Of : September 13, 2006

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Amendments To The Claims

The listing of claims replaces all prior versions and listings of claims. Only those claims being amended herein show their changes in highlighted form, where insertions appear as underlined text (e.g., insertions) while deletions appear as strikethrough text (e.g., ~~deletions~~).

1. **(Currently Amended)** A method of reducing an effect of unwanted signal portions from one or more signals usable to determine a physiological characteristic of pulsing blood, the method comprising:

receiving first and second intensity signals from a light-sensitive detector which detects light of at least first and second wavelengths attenuated by body tissue carrying pulsing blood, wherein the first and second intensity signals each include wanted and unwanted signal portions;

shaping at least some of the unwanted signal portions in the first and second intensity signals away from wanted frequencies;

removing at least some of the shaped unwanted signal portions from the first and second intensity signals; and

calculating a physiological characteristic of the pulsing blood from remaining portions of at least one of ~~the wanted signal portions of the~~ first and second intensity signals.

2. **(Currently Amended)** The method of Claim 1, wherein the shaping is performed with a noise shaping converter which shifts the unwanted signal portions.

3. **(Original)** The method of Claim 2, wherein the noise shaping converter comprises a delta sigma converter.

4. **(Original)** The method of Claim 3, wherein the delta sigma converter comprises a single channel converter.

5. **(Original)** The method of Claim 3, wherein the delta sigma converter comprises a dual channel converter.

6. **(Original)** The method of Claim 1, wherein the physiological characteristic comprises oxygen saturation of the pulsing blood.

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7. (Original) The method of Claim 1, wherein the physiological characteristic comprises a pulse rate of the pulsing blood.

8. (Currently Amended) The method of Claim 1, determining wherein the physiological characteristic comprises a plethysmographic waveform representative of the physiological characteristic.

9. (Currently Amended) The method of Claim 1, wherein the shaping of ~~the at least some of the unwanted signal portions away from the wanted frequencies~~ further comprises shifting the at least some of the unwanted signal portions to higher frequencies.

10. (Currently Amended) A physiological monitor which uses a noise shaping converter to remove unwanted portions of signals usable to determine one or more physiological characteristics, the physiological monitor comprising:

at least one conductive element capable of which receives first and second intensity signals from a light-sensitive detector which detects light of at least first and second wavelengths attenuated by body tissue carrying pulsing blood, wherein the first and second intensity signals each include wanted and unwanted signal portions;

a noise shaping converter which shapes at least some of the unwanted signal portions away from unwanted frequencies;

means for removing from the first or second intensity signals at least some of the shifted unwanted signal portions; and

means for calculating a physiological characteristic of the pulsing blood from remaining portions of at least one of the ~~wanted signal portions of the first and second intensity signals.~~

11. (Original) The method of Claim 10, wherein the noise shaping converter comprises a delta sigma converter.

12. (Original) The method of Claim 11, wherein the delta sigma converter comprises a single channel converter.

13. (Original) The method of Claim 11, wherein the delta sigma converter comprises a dual channel converter.

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14. **(Original)** The method of Claim 10, wherein the physiological characteristic comprises oxygen saturation of the pulsing blood.

15. **(Original)** The method of Claim 10, wherein the physiological characteristic comprises a pulse rate of the pulsing blood.

16. **(Currently Amended)** The method of Claim 10, comprising means for determining wherein the physiological characteristic comprises a plethysmographic waveform representative of the physiological characteristic.

17. **(Original)** The method of Claim 10, wherein the noise shaping converter shapes the unwanted signal portions by shifting the at least some of the unwanted signal portions to higher frequencies.

18. **(Previously Presented)** A method of processing physiological signals in a pulse oximeter, the method comprising:

receiving first and second intensity signals from a light-sensitive detector which detects light of at least first and second wavelengths attenuated by body tissue carrying pulsing blood;

processing the intensity signals with a delta-sigma converter; and

calculating a physiological characteristic of the pulsing blood from the first and second intensity signals.

19. **(Currently Amended)** The method of Claim 18, wherein the intensity signals each include wanted and unwanted signal portions, and wherein the processing reduces an influence of the unwanted signal portions.

20. **(Previously Presented)** The method of Claim 19, wherein the delta signal converter shifts the unwanted signal portions.

21. **(Previously Presented)** The method of Claim 19, wherein the unwanted signal portions comprise motion induced noise.

22. **(Previously Presented)** The method of Claim 19, wherein the delta signal converter shapes at least some of the unwanted signal portions by shifting the at least some of the unwanted signal portions to higher frequencies.

23. **(Previously Presented)** The method of Claim 18, wherein the delta sigma converter comprises a single channel converter.

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24. **(Previously Presented)** The method of Claim 18, wherein the delta sigma converter comprises a dual channel converter.

25. **(Previously Presented)** The method of Claim 18, wherein the physiological characteristic comprises oxygen saturation of the pulsing blood.

26. **(Previously Presented)** The method of Claim 18, wherein the physiological characteristic comprises a pulse rate of the pulsing blood.

27. **(Currently Amended)** The method of Claim 18, comprising determining wherein the physiological characteristic comprises a plethysmographic waveform representative of the physiological characteristic.

28. – 33. **(Canceled).**

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Summary Of Interview

Attending: Examiner Winakur
John Grover (for Applicants)
Jarom Kessler (for Applicants)

Claims Discussed: Those claims amended herein.

Agreement reached on claim language, Examiner to review upon filing of present preliminary amendment.

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